

# (12) United States Patent Hollingworth et al.

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### (54) LIGHTING UNITS FOR ROAD USERS

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See application file for complete search history.

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#### (57)ABSTRACT

A lighting unit (85) for use by a vulnerable road user such as a cyclist, the lighting unit being intended for use as a front light or a rear light, wherein the lighting unit displays a symbol or word that identifies the category of vulnerable road user. It may incorporate two distinct lights: one which is set to achieve light delivery comparable to current standard white front and red rear bike lights, whilst the other is the symbol or word display. The symbol or word display is designed to increase driver recognition, to improve driver reaction time, and to prime appropriate driving behaviour. For example the lighting unit (95) may be a rear light or a front light for a bicycle (10), arranged to display (80) the word BIKE or a symbol of a cyclist on a bicycle. The lighting unit (95) may also include a light source (103) with an external focusing lens.

### 14 Claims, 4 Drawing Sheets

